
FLEXURE DESIGN AND ASSEMBLY PROCESS FOR ATTACHMENT OF SLIDER USING SOLDER AND LASER REFLOW

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ABSTRACT

10 A slider/suspension design and assembly method include securing a slider
to a suspension assembly for use in a magnetic disk drive data recording
device. To this end, solder bumps are applied to a metalized backside surface
of the slider, and are patterned and flown within a plurality of receptacles to
form a rigid mechanical connection between the slider to the flexure, while also
enabling the slider-suspension assembly to be separated without damage
15 during the process. The slider/suspension assembly is initiated by forming a
plurality of slider bars on a wafer, in such a manner that the trailing edge
surfaces of the sliders form a front side of the wafer. A plurality of thin film
read/write elements and a plurality of electrical contact pads are formed on the
wafer front side. Slider bars are then diced from the wafer, and the slider
20 backsides are metalized on the slider bars. A pattern of solder bumps is applied
onto the metalized backsides of the slider bars, and the slider bars are then
sliced to form individual sliders that are secured to corresponding flexures.